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DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

333 W. Nye Lane, Room 138
Carson City, Nevada 89706

November 6, 2002

Mr. Dave McCarthy
Atlantic Richfield Company
307 E Park Ave.
Anaconda, Montana 59711

SUBJECT: Draft Cover Materials Work Plan

Dear Mr. McCarthy:

The Nevada Division of Environmental Protection (NDEP) has received and evaluated the **Draft Cover Materials Work Plan**, dated September 27, 2002, regarding the continued environmental investigation of the Yerington Mine, located in Lyon County near Yerington Nevada. This office provides the following comments from NDEP, EPA, BLM, U.S. Fish and Wildlife and other technical representatives of the Yerington Technical Work Group (YTWG).

NDEP Comments

The **Soil Survey of Lyon County Area, Nevada, United States Department of Agriculture, Soil Conservation Service** should be reviewed and referenced as a part of this work plan. Soil surveys have valuable information regarding soil properties for the top five feet of material as well as various engineering suitability references. A preliminary review of this survey indicates that the soil (Rawe 551) would be best characterized by collecting samples at three depths (0-10, 11-19, and 20-60 inches). Proposed sample depths of one foot are inadequate to characterize the proposed borrow soil unless only the top foot of material will be excavated. Also, other readily

available references such as drill logs for wells located in this potential borrow area should be reviewed, if available.

Section 1.1 Location

There is no mention that Anaconda Leached the W-3 WRA. There is historic documentation that shows the dump was leached in 1965-1968, 1972, 1974, 1975. From the records it appears that it may have been leached continuously for at least 10 years. Parts of the transite pipe return and feed lines are still in place along with some of the leach lines.

Last line there are five leach pad areas not four.

Section 2.1 Quality Assurance and Quality Control Procedures

A "site-comprehensive Quality Assurance/Quality Control (QA/QC)" plan has not been submitted for review and approval.

Page 6

The report states that information will be gathered from other work plans to complete this study. The detail of what information will be gathered from which work plan is not clear. This could be explained with a chart showing the various areas (materials) broken out by characterization activity and which work plan results will be used? Is the writer implying that some Arimetco and other historic data will be used? If so, that could also be shown on the chart. More detail is required to avoid omissions.

Figure 2

It is not clear why we are sampling the Arimetco Leach Pads, S-32 sulfide ore pile, main sulfide tailings impoundment and not the rest of the sulfide and VLT tailings areas? Additional detail to comment for page 6 above may answer this question?

EPA Comments

- 1) Materials that appear otherwise to be useful for cover materials should be further tested for standard physical and engineering properties.
- 2) Radionuclide screening and/or analyses should be proposed. At a minimum, all samples should be screened for radionuclides and a percentage of samples should be analyzed in the laboratory.
- 3) The Quality Assurance and Quality Control sections are incomplete and it is our understanding that Atlantic Richfield will be submitting a comprehensive site-wide Quality Assurance Project Plan (QAPP) in accordance with EPA's guidance

documents (EPA will provide these on request or they can be obtained from EPA's website). After review of the QAPP, the agencies will further comment on any supplementary Quality Assurance/Quality Control sections in the specific work plans. Please provide a date for submittal of the QAPP as this must be reviewed and approved prior to initiation of fieldwork.

- 4) Page 3, Last Paragraph; Please clarify whether NDEP used the meteoric water mobility procedure or the synthetic precipitation leach procedure (SPLP).
- 5) Page 4, DQOs; The discussion regarding exposure scenarios is incomplete. Since this workplan and subsequent investigation will be focusing on the cover materials to be left on-site, the residential exposure pathway should be assessed for these areas. After the data is collected, it should be compared to screening values, such as EPA Region IX Preliminary Remediation Goals. At this time, the determination can be made as to the necessity of a risk assessment for a given area. There is also no discussion of possible exposure pathways for ecological receptors.
- 6) Page 4; The permeability value for the sulfide tailings depends on how the tailings are wetted and compacted. Thus, the value stated is only applicable under the conditions tested. These conditions should be stated.
- 7) Page 6; Materials should be sampled at depths greater than one foot to assure that properties are uniform with depth. Otherwise, the volume estimates for available materials are speculation.
- 8) Page 7; How will the grain size analysis be used to assess the potential to generate fugitive dust?
- 9) Page 7, General; The suitability of using materials as a cover is not complete without assessing the potential of the materials to generate a leachate with undesirable COCs or physical properties (pH, TDS etc.).
- 10) Table 1; Please check your table for proposed metals and methods of analyses. At a minimum, antimony, beryllium, silver and thallium should also be included.
- 11) Figure 2; Are some of these locations duplicates to other samples proposed under different workplans?

Accordingly, please provide the **Draft Final Cover Materials Work Plan**, which incorporates the above comments. This information must be received not later than December 6, 2002, as per the previously agreed on submittal schedule.

Should you have any questions or if I can be of any assistance, please do not hesitate to contact me at (775) 687-9376 or FAX (775) 687-6396. All future correspondence regarding this subject should be addressed to the undersigned.

Sincerely,



Arthur G. Gravenstein, P.E.
Staff Engineer
Remediation Branch
Bureau of Corrective Action

ec: Ms. Jennifer Carr, NDEP
Mr. Doug Zimmerman, NDEP

Cc: Mr. Joe Sawyer, Project Manager, SRK Consulting, 102 Birch Drive, Yerington NV. 89403
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Mr. Elwood Emm, Chairman, Yerington Paiute Tribe, 607 W. Bridge St., Yerington, NV 89447
Mr. Robert Quintero, Chairman, Walker River Paiute Tribe, P.O. Box 220, Schurz, NV 89427
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